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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/583,352	04/20/2007	Thomas Holzbaur	016906-0520	9778
23428 7590 10/27/2009 FOLEY AND LARDNER LLP SUITE 500 3000 K STREET NW WASHINGTON, DC 20007				
EXAMINER				
COLEMAN, KEITH A				
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3747				
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10/27/2009		PAPER		

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

### Office Action Summary

**Application No.**

10/583,352

**Applicant(s)**

HOLZBAUR ET AL.

**Examiner**

KEITH COLEMAN

**Art Unit**

3747

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 17 August 2009.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-18 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-18 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO/SF/ICE)  
Paper No(s)/Mail Date 8/17/2009
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: \_\_\_\_\_

## **DETAILED ACTION**

### ***Continued Examination Under 37 CFR 1.114***

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 8/17/2009 has been entered.

### ***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of

the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

Claims 1, 2, 6, 7-10, 13, and 14 are rejected under 35 U.S.C. 103(a) as being unpatentable over Banzhaf et al. (US Patent No. 5,215,044) in view of Elmer (US Patent No. 4,176,630).

With regards to claims 1 and 10, the patent to Banzhaf et al. discloses all the limitations of the claimed subject matter including a low temperature coolant circuit (41, See Figure 6) configured to cool for cooling charge air in a motor vehicle having a supercharger (9) with a single-unit, integrated charge-air and coolant (45), a temperature sensor (97) is provided at a short distance downstream (See Figure 6), wherein the temperature sensor is configured to measure a coolant outlet temperature (via 97), except positively disclosing **wherein the temperature sensor is located as the coolant outlet prior to any branches in a coolant passage extending from the coolant outlet.**

The patent to Elmer discloses **wherein the temperature sensor (29) is located as the coolant outlet prior to any branches in a coolant passage extending from the coolant outlet (See Figure 1).**

Since Applicant's specification does not disclosed any benefit to locate the temperature sensor before any branches and the location does not result in unexpected results, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to provide the temperature sensor of Banzhaf et al. with **wherein the temperature sensor is located as the coolant outlet prior to any branches in a coolant passage extending from the coolant outlet** in view of the teaching to Elmer, in order to monitor the cooling water temperature (See Col. 2, Lines 55-60 from Elmer) and the modification is invariably a rearrangement of parts. See MPEP 2144.04. IV (c) In re Japikse, 181 F.2d 1019, 86 USPQ 70 (CCPA 1950) (Claims to a hydraulic power press which read on the prior art except with regard to the position of the starting switch were held unpatentable because shifting the position of the starting switch would not have modified the operation of the device.); In re Kuhle, 526 F.2d 553, 188 USPQ 7 (CCPA 1975) (the particular placement of a contact in a conductivity measuring device was held to be an obvious matter of design choice). However, "The mere fact that a worker in the art could rearrange the parts of the reference device to meet the terms of the claims on appeal is not by itself sufficient to support a finding of obviousness. The prior art must provide a motivation or reason for the worker in the art, without the benefit of appellant's specification, to make the necessary changes in the reference device." Ex parte Chicago Rawhide Mfg. Co., 223 USPQ 351, 353 (Bd. Pat. App. & Inter. 1984).

With regards to claim 2, the combination of Banzhaf et al. and Elmer discloses all the limitations of the claimed subject matter including Banzhaf disclosure of wherein the coolant flow rate (via 93) is controlled as a function of the determined coolant temperature (controlled by controller 10).

With regards to claim 6, the combination of Banzhaf et al. and Elmer discloses all the limitations of the claimed subject matter including Banzhaf disclosure of wherein the low temperature coolant circuit is connected to a main coolant circuit, so that there is an exchange of coolant (See Figure 6).

With regards to claims 7 and 8, the combination of Banzhaf et al. and Elmer discloses all the limitations of the claimed subject matter including Banzhaf disclosure of wherein a control valve (93) is arranged in the low temperature coolant circuit (See Figure 6).

With regards to claim 9, the combination of Banzhaf et al. and Elmer discloses all the limitations of the claimed subject matter including Banzhaf disclosure of wherein the coolant traveling from the charge-air/coolant radiator is fed upstream of a pump (52) to a main coolant circuit (See Figure 6).

With regards to claim 13, the combination of Banzhaf et al. and Elmer discloses all the limitations of the claimed subject matter including Banzhaf disclosure of a coolant circuit configured to cool coolant for an engine of the motor vehicle (See Figure 6).

With regards to claim 14, the combination of Banzhaf et al. and Elmer discloses all the limitations of the claimed subject matter including Banzhaf disclosure of a low temperature coolant radiator configured to cool coolant supplied to the single-unit, integrated charge-air and coolant radiator (See Figure 6).

1. Claims 1, 3, 11, 12, and 15-17 are rejected under 35 U.S.C. 103(a) as being unpatentable over Elmer (US Patent No. 4,176,630) in view of Melchor (US Patent No. 4,485,624)

With regards to claims 1 and 10, the patent to Elmer discloses all the limitations of the claimed subject matter including a circuit arrangement (18 and 19) having a low temperature coolant circuit (Abstract) for cooling charge air in a motor vehicle having a supercharger with a charge air cooler and coolant radiator (17,13, Col. 2, Lines 33-37), a temperature sensor (29, Col. 2, Lines 7-10) is provided at the coolant outlet of the coolant radiator (via passage 19 with sensor 26) **wherein the temperature sensor (29) is located as the coolant outlet (19) prior to any branches in a coolant passage extending from the coolant outlet(19),** except positively disclosing **wherein the**

**coolant circuit comprises a coolant passage (18 and 19) configured to cool the single unit, integrated charge-air and coolant radiator with coolant flowing through the passage (18 and 19).**

The patent to Melchor discloses **wherein the coolant circuit (13) comprises a coolant passage (13) configured to cool the single unit, integrated charge-air and coolant radiator (10) with coolant flowing through the passage (13, See Col. 2, Lines 55-60).**

It would have been obvious to a person of ordinary skill in the art at the time the invention was made to modify the coolant circuit of Elmer with **wherein the coolant circuit comprises a coolant passage configured to cool the single unit, integrated charge-air and coolant radiator with coolant flowing through the passage** in view of the teaching to Melchior, in order to successively cool the supercharging air (See Col. 2, Lines 60-65 from Melchior)

With regards to claim 3, the combination of Elmer and Melchior discloses all the limitations of the claimed subject matter including Elmer disclosure of wherein the temperature sensor is a thermostat (Col. 2, Lines 6-10).

With regards to claims 11 and 18, the combination of Elmer and Melchior discloses all the limitations of the claimed subject matter including Elmer disclosure of wherein the coolant flow rate through the radiator is controlled taking into consideration a rotational speed (Col. 2, Lines 45-63).



With regards to claim 12, the combination of Elmer and Melchior discloses all the limitations of the claimed subject matter including Elmer disclosure of wherein the temperature sensor is integrated with the coolant outlet of the radiator (See Figures 1-3).

With regards to claim 15, the combination of Elmer and Melchior discloses all the limitations of the claimed subject matter including Elmer disclosure of wherein the step of determining the temperature of the coolant at the outlet of the radiator is performed by using a sensor integrated with the coolant outlet of the radiator (See Figures 1-3).

With regards to claim 16, the combination of Elmer and Melchior discloses all the limitations of the claimed subject matter including Elmer disclosure of further comprising the step of circulating coolant for an engine of the motor vehicle through a second circuit (See Figures 1-3).

With regards to claim 17, the combination of Elmer and Melchior discloses all the limitations of the claimed subject matter including Elmer disclosure of wherein the step of circulating coolant through the low temperature circuit comprises circulating the coolant through a low temperature coolant radiator configured to cool the coolant supplied to the single-unit, integrated charge-air and coolant radiator (See Figures 1-3).

Claims 4 and 5 are rejected under 35 U.S.C. 103(a) as being unpatentable over Elmer (US Patent No. 4,176,630) and Melchoir (US Patent No. 4,485,624) in view of Matthew et al. (US Patent No. 6,679,431)

With regards to claim 4, the patent to Elmer discloses all the limitations of the claimed subject matter except positively disclosing wherein the temperature sensor is integrated into a plastic part which serves to carry coolant.

The patent to Matthew et al. discloses wherein the temperature sensor (14, Col. 1, Lines 65-68) is integrated into a plastic part which serves to carry coolant (Col. 1, Lines 5-10).

It would have been obvious to a person of ordinary skill in the art at the time the invention was made to modify the thermostat of Elmer with wherein the plastic part is produced by means of plastic injection-molding in view of the teaching to Matthew et al., in order to have a thermostat and housing that is reliable and easy to manufacture (Col. 1, Lines 20-25)

With regards to claim 5, the patent to Elmer discloses all the limitations of the claimed subject matter except positively disclosing wherein the plastic part is produced by means of plastic injection-molding.

The patent to Matthew et al. discloses wherein the plastic part is produced by means of plastic injection-molding.

It would have been obvious to a person of ordinary skill in the art at the time the invention was made to modify the thermostat of the Elmer with wherein the plastic part is produced by means of plastic injection-molding in view of the teaching to Matthew et al., in order to have a thermostat and housing that is reliable and easy to manufacture (Col. 1, Lines 20-25)

***Response to Arguments***

2. Applicant's arguments with respect to claims 1-18 have been considered but are moot in view of the new ground(s) of rejection.

***Applicant's Arguments***

U.S. Patent No. 4,176,630

Claims 1, 3, 11, 12, and 15-17 are rejected under 35 U.S.C. § 102(b) as being anticipated by U.S. Patent No. 4,176,630 to Elmer (hereafter "Elmer"). This rejection is respectfully traversed.

A claim is anticipated only if each and every element as set forth in the claim is found, either expressly or inherently described, in a single prior art reference. *Verdegaal Bros. v. Union Oil Co. of California*, 2 USPQ 2d 1051, 1053 (Fed. Cir. 1987). See generally M.P.E.P. § 2131.

Elmer discloses a system that includes a radiator 17 for cooling the coolant of an engine 10 and an air cooler 13 for cooling compressed air supplied to the engine 10. See Elmer at col. 2, lines 24-44. Elmer discloses that a cooling fan 15 is arranged to supply cooling air to the radiator 17 and the cooler 13. See Elmer at col. 2, lines 41-44.

—

[1]However, Elmer does not disclose that the system includes a coolant passage configured to cool the radiator 17 with coolant flowing through the passage, as recited in claims 1 and 10. Claims 3 and 12 depend from claim 1 and claims 11 and 15-17 depend from claim 10.

Instead, Elmer discloses that the radiator 17 and cooler 13 are cooled by air provided by the cooling fan 15. Nor does Elmer disclose that the radiator 17 and cooler 13 are joined by a coolant passage that cools one of the radiator 17 or the cooler 13 with coolant provided by the other of the radiator 17 or the cooler 13.

Elmer also discloses that the system includes a sensor 29 located in a return flow passage 19 for the engine coolant. See col. 2, lines 45-62, of Elmer. The Office identifies the sensor 29 as a temperature sensor provided at the coolant outlet of a coolant radiator on page 2 of the Office Action.

However, the sensor 29 is not a temperature sensor located at a coolant outlet of a radiator, wherein the temperature sensor is located at the coolant outlet prior to any

branches in a coolant passage extending from the coolant outlet, as recited in claim 1, because the sensor 29 is provided in a flow passage 19 returning from the radiator 17 for engine coolant. Claim 10 includes similar language.

For at least the reasons discussed above, Elmer does not anticipate claims 1, 3, 11, 12, and 15-17 because Elmer does not disclose all of the features of claims 1 and 10. Reconsideration and withdrawal of this rejection is respectfully requested.

U.S. Patent No. 5,215,044

Claims 1, 2, 6, 7-10, 13, and 14 are rejected under 35 U.S.C. § 102(b) as being anticipated by U.S. Patent No. 5,215,044 to Banzhaf et al. (hereafter "Banzhaf"). This rejection is respectfully traversed.

Banzhaf discloses a cooling system for a vehicle that includes a turbocharger 9 that conveys air to a heat exchanger 45 that is also provided with coolant via line system 41. See col. 7, lines 18-30, and Figure 6 of Banzhaf.

[2]On page 4 of the Office Action the Office identifies the temperature sensor 97 of Banzhaf as a temperature sensor 97 provided a short distance downstream of the heat exchanger 45. However, the temperature sensor 97 is not provided at a coolant outlet of a radiator, wherein the temperature sensor is located at the coolant outlet prior

to any branches in a coolant passage extending from the coolant outlet, as recited in claim 1. Claim 10 includes similar language. Claims 2, 6, 7-9, 13, and 14 depend from claim 1. Figure 6 of Banzhaf shows that the sensor 97 is located after branches in the passage leading from the heat exchanger 45.

For at least the reasons discussed above, Banzhaf does not anticipate claims 1, 2, 6, 7- 10, 13, and 14 because Banzhaf does not disclose all of the features of claims 1 and 10.

Reconsideration and withdrawal of this rejection is respectfully requested.

#### Rejections Under 35 U.S.C. § 103

Claims 4 and 5 are rejected under 35 U.S.C. § 103(a) as being unpatentable over Elmer in view of U.S. Patent No. 6,679,431 to Mathew et al. (hereafter "Mathew"). This rejection is respectfully traversed. Mathew fails to remedy the deficiencies of Elmer discussed above in regard to independent claim 1, from which claims 4 and 5 depend. Reconsideration and withdrawal of this rejection is respectfully requested.

#### New Claim

New claim 18 has been added. Claim 18 depends from claim 10 and is allowable over the prior art for at least the reasons discussed above.

### ***Examiner's Response to Arguments***

With regards to Applicant's first argument, Applicant has amended the claim language to positively recite that the integrated unit is cooled by coolant. The patent to Elmer discloses an integrated unit, however, it simply elides over any teaching that the

cooling water cools the unit (13 and 17). In any regards, Melchior explicitly teaches using coolant to not only cool the engine but also heat exchanger 10. As such, the newly amended claims were rejected accordingly.

With regards to Applicant's second argument, the Banzhaf reference clearly multiple temperature sensors in Figure 6 and sensor 97 is located downstream of heat exchanger 45. However, this reference also elides over any teaching of moving the temperature sensor closer to heat exchanger 45 and Applicant has amended the claim language to overcome the 102 rejection. However, it would have been obvious to one of ordinary skill in the art to move the sensor closer and the reference to Elmer explicitly teaches this limitation. As such, the newly submitted claim and respective dependents were rejected accordingly.

In addition, claim 18 was rejected with claim 11.

### ***Conclusion***

3. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Spinnler (US Patent No. 4,893,589) shows the current state of the art.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to KEITH COLEMAN whose telephone number is (571)270-3516. The examiner can normally be reached on 5:30-4:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Stephen Cronin can be reached on (571)272-4536. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

KAC  
/K. C./  
Examiner, Art Unit 3747

/Stephen K. Cronin/  
Supervisory Patent Examiner, Art Unit 3747